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AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/171,558	03/29/99	PREIKSCHAT	P P6641713

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IM62/0807

EXAMINER	
KOEHLER, R	
ART UNIT	PAPER NUMBER

1775

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DATE MAILED: 08/07/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/171,558	Applicant(s) Preikeschat, et al.
	Examiner Robert Koehler	Group Art Unit 1775

Responsive to communication(s) filed on Mar 29, 1999, June 22, 2000, and July 18, 2000.
 This action is FINAL.
 Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 58-119 is/are pending in the application.
 Of the above, claim(s) _____ is/are withdrawn from consideration.
 Claim(s) 58-72 and 74-119 is/are allowed.
 Claim(s) 73 is/are rejected.
 Claim(s) _____ is/are objected to.
 Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
 The drawing(s) filed on Mar 29, 1999 is/are objected to by the Examiner.
 The proposed drawing correction, filed on _____ is approved disapproved.
 The specification is objected to by the Examiner.
 The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 All Some* None of the CERTIFIED copies of the priority documents have been
 received.
 received in Application No. (Series Code/Serial Number) _____.
 received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892
 Information Disclosure Statement(s), PTO-1449, Paper No(s). 1., 3., 7., 10., 13., 15.
 Interview Summary, PTO-413
 Notice of Draftsperson's Patent Drawing Review, PTO-948
 Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Specification

A. The abstract of the disclosure is objected to because it contains the notation “(Fig. 2)”.

The Examiner respectfully suggests that the notation “(Fig. 2)” be deleted. Correction is required. See MPEP § 608.01(b).

B. The disclosure is objected to because of the following informalities: **(1)** All references to claim numbers in the specification should be deleted from the following locations: lines 7 to 11 on page 1 (7 occurrences); lines 5 to 9 on page 6 (7 occurrences); lines 28 to 29 on page 6; line 31 on page 6 (1 occurrence); and lines 6 to 7 on page 16 (2 occurrences). **(2)** A brief description of Figure 38 has not been presented on page 7. **(3)** In line 17 on page 10, Figure 1 is incorrectly identified as containing various values of the rate constant “ k_j .” Figure 1 only refers to a color comparison of various passivated metal specimens. The Examiner believes that “ k_j ” constants are presented in Figure 38. **Also**, note that in line 1 on page 11, the wording “(originally Illustration 1)” should be deleted. **(4)** Lines 13 to 15 and 17 to 19 on page 17 should not rely on the page number of the specification. It should be sufficient to identify the conventional chromations by referring to the specific method groups presented in DIN 50960 (i.e., see lines 12 and 30 on page 2). **(5)** The kinetics term in line 4 on page 10 is not written clearly. The left parenthesis overlaps the letter “h” of “tanh,” and the right parenthesis is missing. **(6)** The Examiner respectfully

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suggests that the specification includes appropriate section headings in order to subdivide the text into specific portions having recognizable subject matter.

Appropriate correction is required.

C. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not contain information about a conversion layer regarding the concentration of chromium as claimed in lines 9 to 17 of claim 58. Compare the information in claim 58 with the subject matter in line 34 on page 6 to line 2 on page 7. Also, the claimed subject matter in lines 2 to 4 of claim 59 is missing from the specification.

D. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not contain the subject matter as presented in claims 60 to 64 and 68 to 77.

E. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not contain the subject matter as presented in claims 78 to 95.

F. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the

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following is required: The specification does not contain the subject matter as presented in claims 96 to 114.

G. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not contain the subject matter as presented in claims 115 to 119.

H. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not provide the proper support for applicants' claimed "Lanthanides;" for example, see claim 71. The term "lanthanides" must be included at an appropriate location in the specification. Also, the term "lanthanides" should be defined in the specification either by listing all of the elements of the lanthanide series or by referring to the specific period of the Periodic Table for those elements.

I. A substitute specification excluding claims is required pursuant to 37 CFR 1.125(a) because numerous, lengthy additions and other alterations must be made to the specification in order to satisfy the objections to the specification; see paragraphs **B.** to **H.** in this section of the Office Action. The Examiner believes that all of these additions and alterations will render it difficult to consider the application or to arrange the papers for printing or copying, 37 CFR 1.125.

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A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

Drawings

A. The drawings are objected to because the depth profile analyses in Figures 5 to 35 are not clearly labeled for each reported element. For example, in Figure 5 it is impossible to understand which profile belongs to K or N or Zn or Cr. Perhaps the applicants can provide a different identification key which clearly associates each profile with the proper element. Correction is required.

B. The drawings are objected to because all of the drawings contain the designations "Diagram 1" and "Diagram 2". These designations should be removed from all of the drawings. Correction is required.

C. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

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The Examiner notes that Figures 1, 3, and 4 utilize color photographs for the purpose of describing conventional “chromation” and the applicants’ invention.

The drawings are considered to be informal because they fail to comply with 37 CFR 1.84(a)(1) which requires black and white drawings using India ink or its equivalent.

Photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) or (b)(1) is granted permitting their use as formal drawings. In the event applicant wishes to use the drawings currently on file as formal drawings, a petition must be filed for acceptance of the photographs or color drawings as formal drawings. Any such petition must be accompanied by the appropriate fee as set forth in 37 CFR 1.17(I), three sets of drawings or photographs, as appropriate, and, if filed under the provisions of 37 CFR 1.84(a)(2), an amendment to the first paragraph of the brief description of the drawings section of the specification which states:

The file of this patent contains at least one drawing executed in color. Copies of this patent with color drawing(s) will be provided by the Patent and Trademark Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 73 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 73 is rejected as being vague and indefinite because the claim recites an unknown chemical entity called "phosphoric ions." Perhaps the applicants intended the wording "phosphoric acid ions."

Allowable Subject Matter

Claims 58 to 72 and 74 to 119 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach, suggest, or disclose applicants' claimed subject matter to a conversion coating layer on zinc or a zinc alloy comprising chromium (III) having a thickness of about 100 nm to about 1000 nm wherein the conversion coating layer has across the conversion layer thickness a chromium content of greater than 1% based upon zinc and chromium, the conversion coating layer has an average chromium content of more than approximately 5% based on zinc and chromium, and the conversion coating layer has a chromium index greater than approximately 10. Also, the prior art does not teach, suggest, or disclose applicants' claimed method of producing a chromium (VI)-free conversion coating layer on a metallic surface wherein the metallic surface is

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treated with a solution of at least one chromium (III) complex having a Cr (III) concentration of approximately 5 to 100 g/l and wherein the Cr (III) complex has ligand replacement kinetics more rapid than the fluoride replacement kinetics in Cr (III)-fluorocomplexes. Also, the prior art does not teach, suggest, or disclose applicants' claimed passivation bath for passivating a metal surface comprising chromium (III) in a concentration of approximately 5 to 100 g/l wherein the Cr (III) present in the passivation bath is in the form of at least one Cr (III) complex having ligand replacement kinetics more rapid than the fluoride replacement kinetics in Cr (III)-fluorocomplexes. Also, the prior art does not teach, suggest, or disclose applicants' claimed concentrate for producing a passivation solution for passivating a metal surface wherein the concentrate contains chromium (III) passivating component and the Cr (III) is present in the form of at least one complex having ligand replacement kinetics more rapid than the fluoride replacement kinetics in Cr (III)-fluorocomplexes.

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 4,801,337 (Higgins) teaches an improved composition and process for forming a corrosion-resistant complex oxide coating on a zinc or zinc alloy surface which incorporates at least three complexed polyvalent metals, one of which is trivalent chromium.

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Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Robert Koehler whose telephone number is **(703) 308-1974**. The Examiner can normally be reached on Tuesday to Friday from 8:30 AM to 6:00 PM. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on (703) 308-3822. The fax phone number for this Art Unit is (703) 305-5436. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center receptionist whose telephone number is (703) 308-0661.

Robert R. Koehler

Robert R. Koehler
Patent Examiner
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August 4, 2000